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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/498,995	02/07/2000	Takafumi Watanabe	04284.0829	9593

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EXAMINER

KIM, JUNG W

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/498,995

Applicant(s)

WATANABE, TAKAFUMI

Examiner

Jung W Kim

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 8-17 have been examined. Applicant has amended claims 8-14 and 16, and canceled claims 1-7 in the amendment filed on June 10, 2004.

Response to Amendment

2. The objection to the specification is withdrawn as the amendment to the disclosure overcomes the objection.

3. The objection to the title is withdrawn, as the title is more clearly indicative of the invention to which the claims are directed.

4. The objections to claims 8 and 9 are withdrawn as the amendment overcomes the objections.

5. The 35 U.S.C. 112, second paragraph rejections to claims 5 and 6 are withdrawn as the claims have been canceled.

6. The 35 U.S.C. 112, second paragraph rejection to claims 11, 12, 14 and 16 are withdrawn as the amendments to the claims overcome the rejections.

7. The 35 U.S.C. 112, second paragraph rejection to claims 1 and 4 are withdrawn as the claims have been canceled.

Response to Arguments

8. The following is a response to the amendment and argument presented by the Applicant in the amendment filed on June 10, 2004.

9. Applicant's argument, see page 7, last paragraph, with respect to the rejections to claims 8 and 9 under 35 U.S.C. 112, first paragraph have been fully considered and are persuasive. The 112, first paragraph rejections to claims 8 and 9 have been withdrawn.

10. Regarding applicant's argument that Iijima does not disclose "means for storing validity data indicating whether the security function is valid in a nonvolatile memory, wherein the validity data is received as a command message from outside of the device" and "first means for writing or rewriting data in the nonvolatile memory after receiving the command message when the first determining means determines that the command message does not include the validity data for the security function and the second determining means determines the validity data is not stored in the nonvolatile memory" (see page 9, 1st full paragraph-page 10, 1st paragraph), examiner disagrees. The value of the assignment flag or the absence/presence of the DF are disclosed by Iijima as validity data to indicate whether the security function is valid. This feature is more pointedly disclosed by Iijima in col. 12, lines 40-44 and 55-59. Furthermore, Iijima discloses DF definition data is received as a command message from outside the device. See Iijima, col. 6, lines 5-6; Figure 1 and related text. Finally, data is written in memory (see Iijima, col. 6, lines 41-50) after receiving the command message (see Iijima, col. 5, lines 65-67) and the command message does not include the validity data

for the security function (see Iijima, col. 6, lines 5-7) and the validity data is not stored in memory (see Iijima, col. 6, lines 19-30).

11. Regarding applicant's argument that the Schneier prior art does not teach a missing limitation of the invention covered by Iijima (see page 11, first paragraph), examiner disagrees and points to the following disclosure in Schneier: pages 28-44, digital signature, one-way hash; page 587, section 24.13 smart cards.

12. Regarding applicant's assertion that examiner takes Official Notice for the rejection of claims 12 and 14 is erroneous. See page 11, 3rd paragraph-page 12, 2nd paragraph. The rejection is made under the prior art of Iijima in view of Schneier.

13. Regarding applicant's argument that the Grimonprez prior art does not teach a missing limitation of the invention covered by Iijima in view of Schneier (see page 13, first paragraph), examiner disagrees and points to the following disclosure in Grimonprez: Figures 3, 8 and 9.

14. Regarding applicant's argument that no motivation is provided to combine the teachings of Grimonprez with that of Iijima and Schneier (see page 13, first paragraph), examiner disagrees and reiterates that the motivation for such a combination would enable the card to securely provide a plurality of applications wherein the password to

access one application would be independent of the passwords to access the others as taught by Grimonprez and as known to one of ordinary skill in the art.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 8-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima U.S. Patent No. 5,365,045 (hereinafter Iijima).

17. As per claim 8, Iijima discloses a portable electronic device with a security function, containing an application program, comprising:

- a. means for storing validity data indicating whether the security function is valid in a nonvolatile memory, wherein the validity data is received as a command message from outside of the device (see Iijima, col. 5, line 56-col. 6, line 18);
- b. first means for determining whether the command message includes data for the security function (see Iijima, col. 6, lines 5-14);
- c. second means for determining whether the validity data is stored in the nonvolatile memory (see Iijima, col. 6, lines 15-18); and

d. first means for writing or rewriting data in the nonvolatile memory after receiving the command message when the first determining means determines that the command message does not include the validity data for the security function and the second determining means determines the validity data is not stored in the nonvolatile memory (see *Iijima*, col. 5, line 64-col. 6, line 50, especially col. 6, lines 19-50).

The aforementioned covers claim 8.

18. As per claim 9, *Iijima* discloses a device as outlined above in the claim 8 rejection under 35 U.S.C. 102(b). In addition, the card further comprises a first means for outputting a status indicating that the command message is not acceptable when the first determining means determines that the command message is not included in the data for the security function and the second determining means determines that the validity data is stored in the nonvolatile memory. See *Iijima*, col. 6, lines 15-18. The aforementioned covers claim 9.

19. As per claim 10, *Iijima* discloses a device as outlined above in the claim 8 rejection under 35 U.S.C. 102(b). In addition, the card further comprises:

a. a third means for determining whether verification of the data for the security function succeeded when the first determining means determines the command message is included in the data for the security function (see *Iijima*, col. 9, line 63-col. 10, line 20); and

- b. second means for writing or rewriting data into the nonvolatile memory following the command message when the third determining means determines the verification was successful (see *lijima*, col. 10, line 30-col. 11, line 27).

The aforementioned covers claim 10.

20. As per claim 11, *lijima* discloses a device as outlined above. In addition, the card further comprises a second means for outputting a status indicating that the command message is not acceptable when the third determining means determines the verification of the data for the security function was not successful. See *lijima*, col. 11, lines 42-62. The aforementioned covers claim 11.

21. As per claim 13, *lijima* discloses a device as outlined above. In addition, the command message further comprises:

- a. a writing or rewriting command (see *lijima*, col. 10, lines 42-45); and
- b. encoded data that is written or rewritten into the nonvolatile memory after being decoded based on verification of the data (see *lijima*, col. 4, lines 9-17).

The aforementioned covers claim 13.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Schneier Applied Cryptography 2nd Edition (hereinafter Schneier).

24. As per claims 12 and 14, Iijima covers a device as outlined above in the claim 9, 10 and 13 rejections under U.S.C. 102(b). Although, Iijima does not explicitly disclose additional spare data on the command message guaranteeing the validity of the data, information transferred to an IC card is typically secured and validated by cryptographic methods as taught by Schneier. See Schneier, page 587, Section 24.13 'Smart Cards'. Furthermore, Schneier teaches several general protocols to verify data using digital signatures and hashes. See Schneier, pages 28-44; digital signature, one-way hash. It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Schneier to the invention covered by Iijima. Motivation for such an implementation would enable verification of command data by the IC card as taught by Schneier. Ibid. The aforementioned covers claims 12 and 14.

25. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Schneier, further in view of Grimonprez et al. U.S. Patent No. 5,473,690 (hereinafter Grimonprez).

26. As per claim 15, Iijima covers a device as outlined above. Although, Iijima does not expressly disclose storing a plurality of application programs wherein each program

has an associated security program, IC cards are typically designed to hold more than one application securely. For example, Grimonprez discloses a secure method for loading a plurality of applications on to a microprocessor of an IC card wherein each application has a corresponding security program. See Grimonprez, Figure 3, 'Name of Application' and 'Password of Application'; Figures 8 and 9. It would be obvious to one of ordinary skill in the art at the time the invention was made for the IC card to store a plurality of security programs, each corresponding to an application program.

Motivation for such an implementation would enable the card to securely provide a plurality of applications wherein the password to access one application would be independent of the passwords to access the others as taught by Grimonprez. Ibid. The aforementioned covers claim 15.

27. As per claim 16, Iijima covers a device as outlined above. In addition, a plurality of security programs are separately validated in response to a prescribed command message for validation, and wherein each security program corresponds to an application program. See Iijima, col. 4, lines 4-8; col. 11, line 28-col. 12, line 19 as modified by Grimonprez, Figures 3, 8, and 9 and related text. It would be obvious to one of ordinary skill in the art at the time the invention was made for a plurality of security programs to be separately validated in response to a prescribed command message for validation, and wherein each security program corresponds to an application program in the device taught by Iijima to ensure the security of each of the

plurality of applications as taught by Grimonprez and as known to one of ordinary skill in the art. Ibid. The aforementioned covers claim 16.

28. As per claim 17, Iijima covers a device as outlined above. In addition, at least one available format of the command message is separately defined, and wherein each format corresponds to an application program. See Iijima, Figures 11-17 as modified by Grimonprez, Figures 3, 8, and 9 and related text. It would be obvious to one of ordinary skill in the art the time the invention was made for at least one available format of the command message to be separately defined, and wherein each format corresponds to an application program in the device covered by Iijima to enable storage flexibility of disparate applications designed based on distinct formats, since digital formats are ever adjusting with each version of a given application as taught by Grimonprez and as known to one of ordinary skill in the art. Ibid. The aforementioned covers claim 17.

Conclusion

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephone Inquiry Contacts

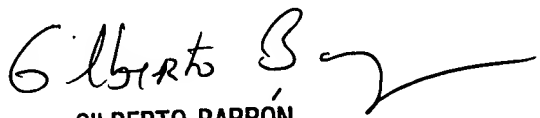
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (703) 305-8289. The examiner can normally be reached on M-F 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jung W Kim
Examiner
Art Unit 2132

Jk
August 11, 2004


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